

Using Project Explorer to Manage Detailing Symbols, Match Marks, Reference Notes and Drawing Numbers in MicroStation V8i

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The following workflow gives instructions for using project explorer to manage drawing numbers, so section cuts, detail callouts, detail titles, match marks and reference notes in Microstation V8i. By following this workflow all of these tools will be linked together and updated automatically if a drawing number is changed.

Section 1 Project Explorer and Link Sets

1.1 Project Explorer

Project explorer can be used to organize project data in Microstation and is where the link set is stored and created. Project explorer enables the users to navigate easily and efficiently through the link set to see all of the sheet models as well as every drawing title that is created.

1.2 Link Set

Link Sets are created using project explorer and are a way to organize project data and help in the creation of links between all this data. The link set gets its intelligence from the model properties of a Microstation file so these properties must be populated correctly, (see [section 1.3](#) of this document). These links created in the link set will still be active after a PDF is created.

1.2.1 Link Set Creation

The project link set is created in its own 2-D Microstation file. The following gives direction on how to create a project link set:

1. Create a new Microstation file using the “CT_Sheet_Civil_2D_V8i.dgn” seed.
2. Name the file “Project #123-4567 Link Set.dgn”.
3. Once the file is open create the link set by following the figures below:

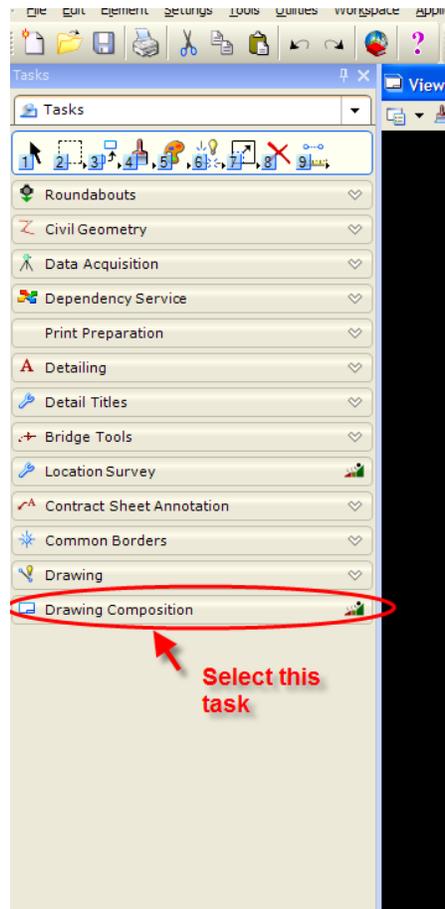


Figure 1 - Drawing Composition Task

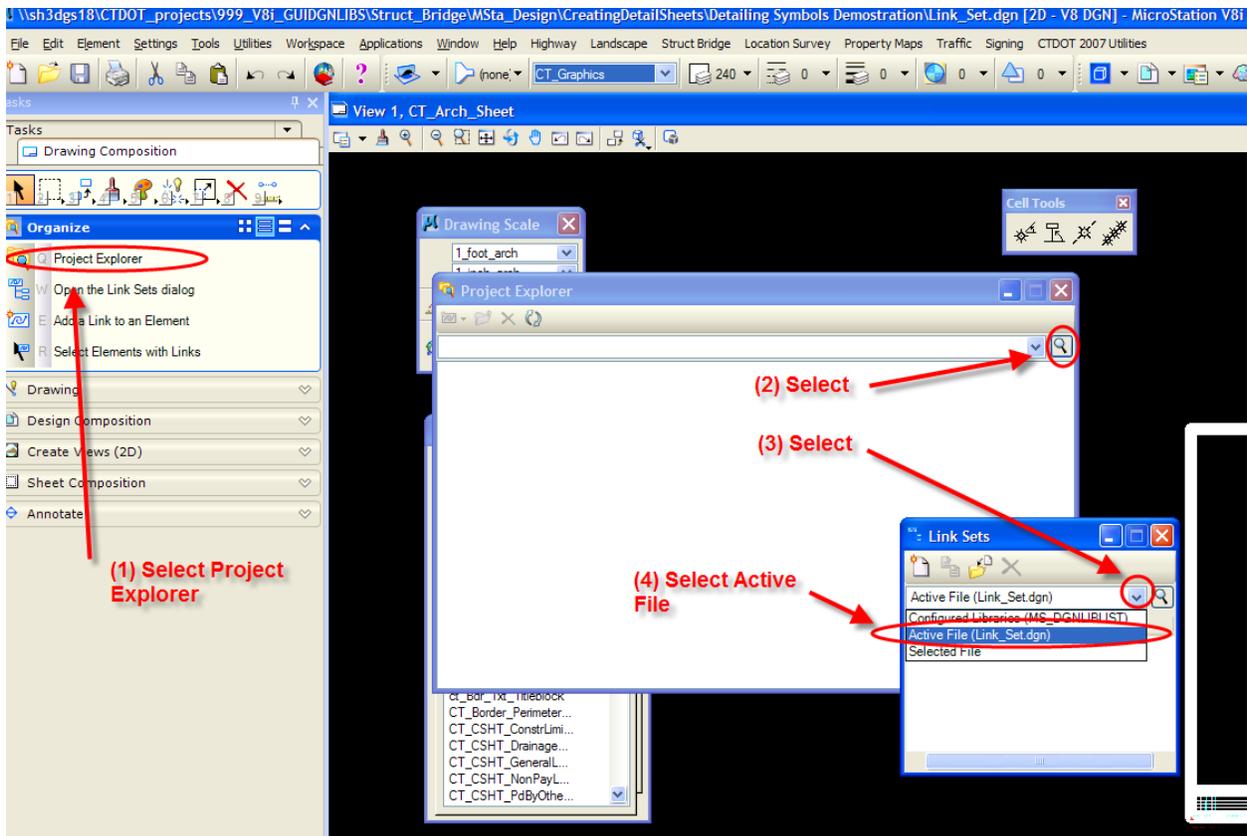


Figure 2 - Creating Link Set

Next we will create the link set in the active file. See figure below:

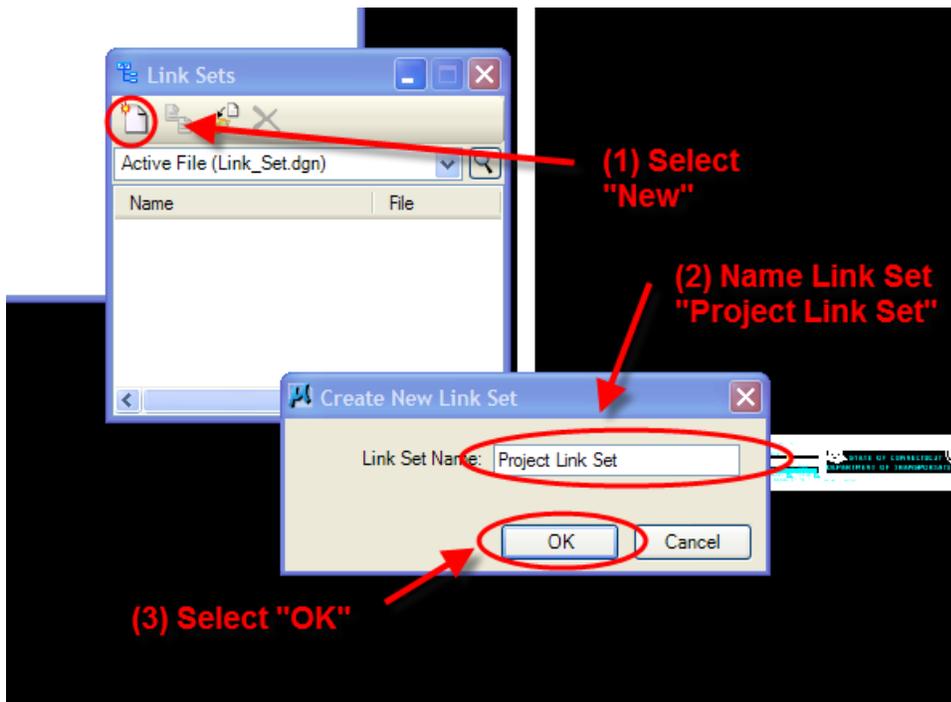


Figure 3 - Creating Link Set

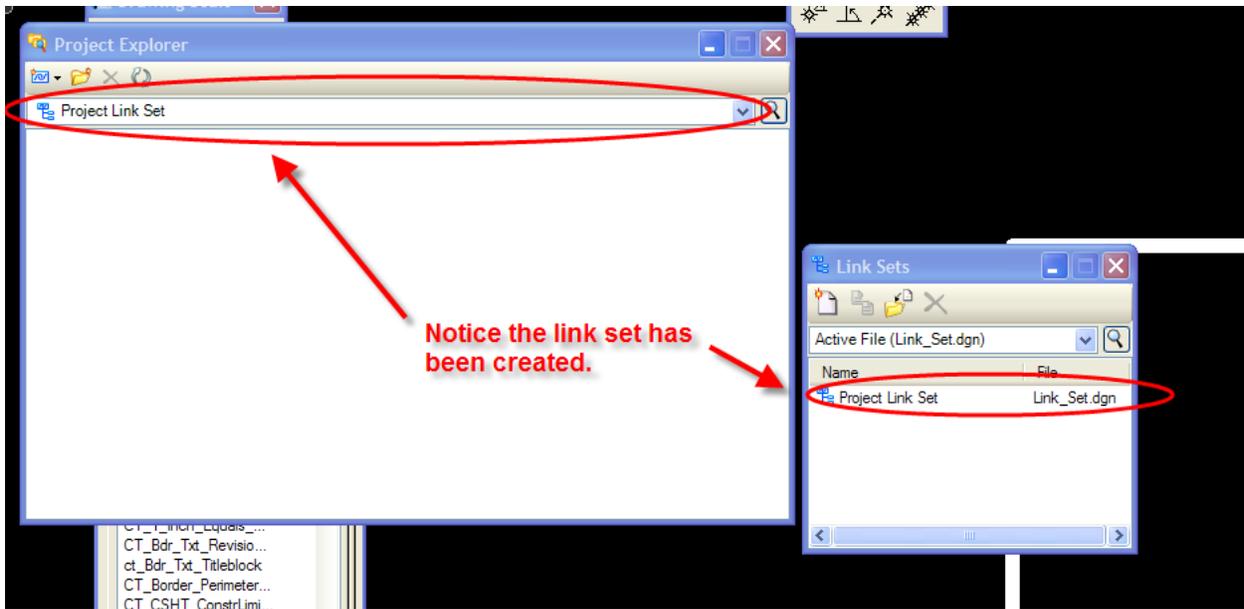


Figure 4 - Link Set

Next the sheet model folder in the Link set must be created. This folder will be where all sheet models are added to the link set. See figure below:

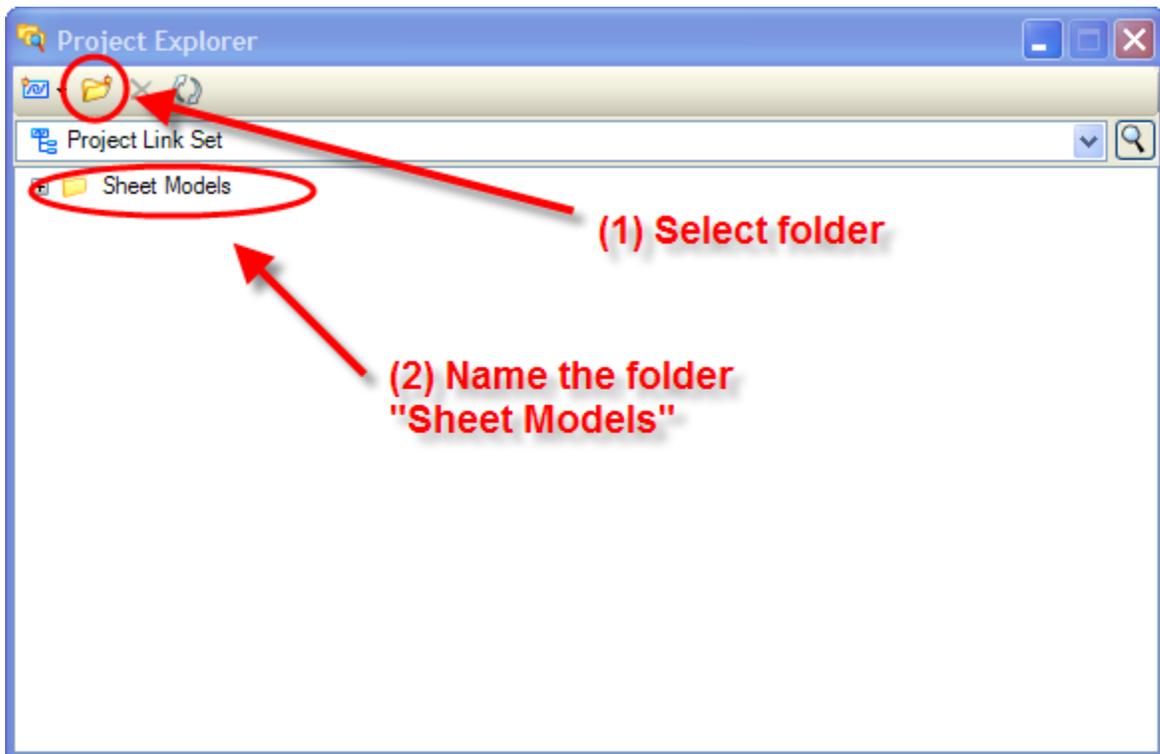


Figure 5 - Creating Sheet Model Folder in Link Set

The project link set is now created and can have sheet models added to it. The sheet models must be created in accordance with the following the section of this document.

1.3 Sheet Model Properties

1.3.1 New 2-D Sheet Model

The link set and detailing symbols take their information from the sheet model properties. The first step is to adjust the sheet model properties.

After creating a new 2-D Sheet model using the CTDOT standard seed file, adjust the sheet model properties.



Figure 6 - Model Icon

Adjust the sheet model properties show below:

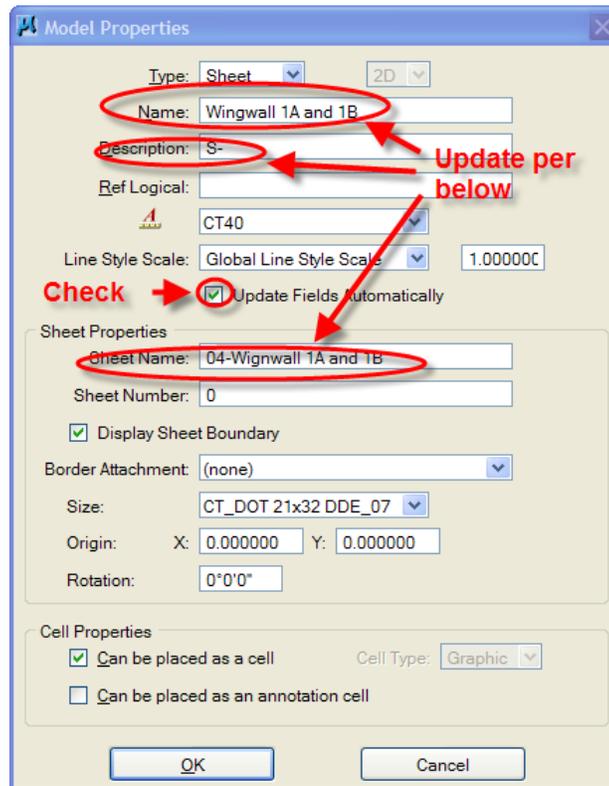


Figure 7 - Model Dialog Box

The sheet model properties need to be adjusted using the following:

- Name → Sheet model name i.e. Deck Plan
- Description → S-, HWY-, TR-, etc
- Sheet Name → ## - Sheet Title i.e. 01-Deck Plan, the number order the sheets in Project Explorer

1.3.2 Existing 2-D Sheet Models

When adjusting the model properties of existing sheet models follow the same procedure in [section 1.3.1](#) for adjusting the sheet model properties. The user will have to delete all of the section cuts, detail bubbles, and drawing titles they have already made and replace following [Section 2](#) of this workflow.

1.4 Adding Sheet Models to the Link Set

After opening a sheet model follow the figures below to add that sheet model to the project link set:

First in Project explorer open the project link set.

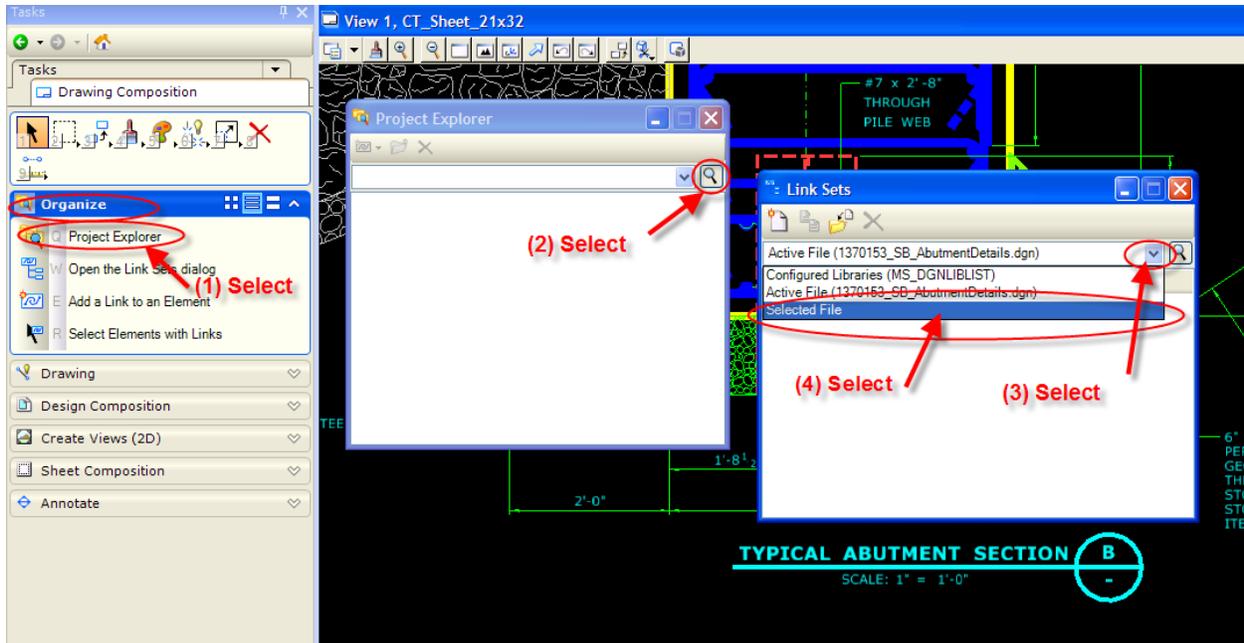


Figure 8 - Link Set

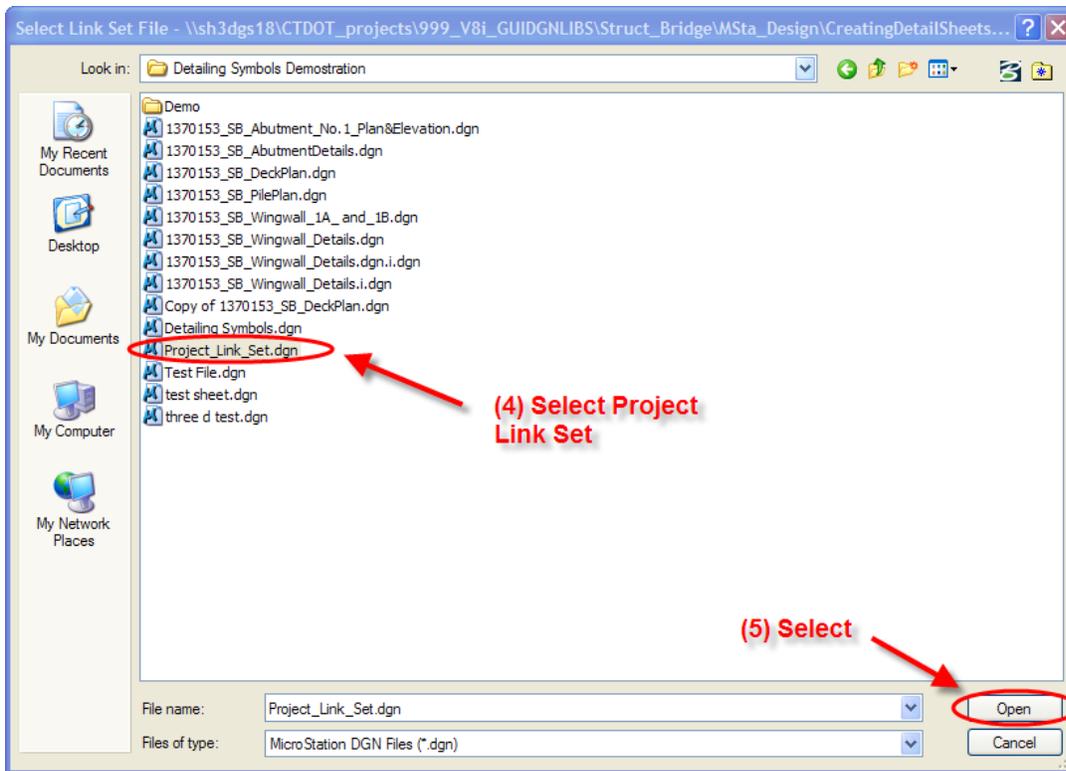


Figure 9 - Link Set

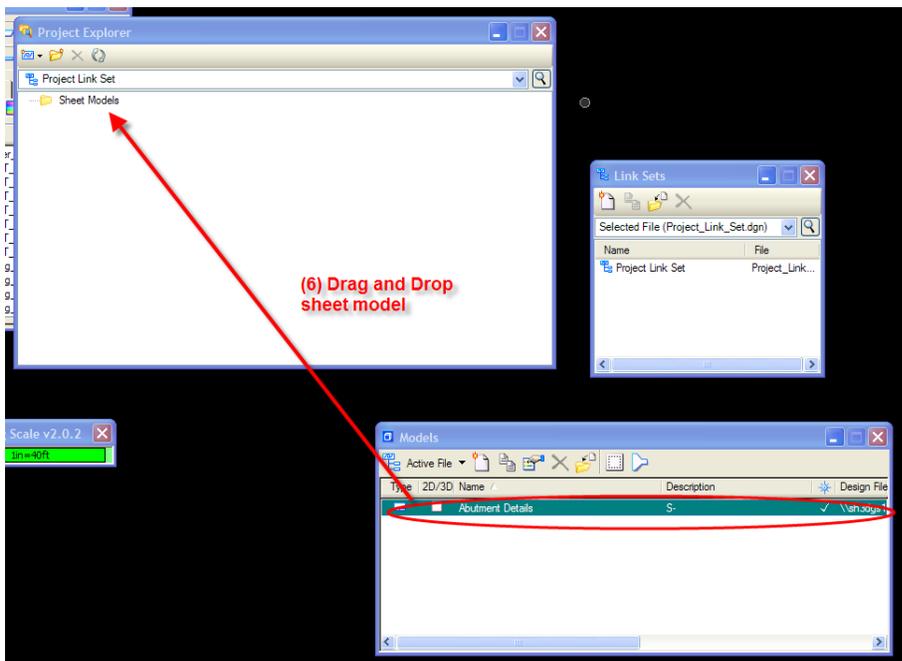


Figure 10 - Adding Sheet Models to Link Set

1.4.1 Renumbering Sheet Models

After all the sheet models for a project are dragged into the link set, the user will place them in the correct order and renumber the sheet models. To place in the correct order, simply drag the files in the correct order.

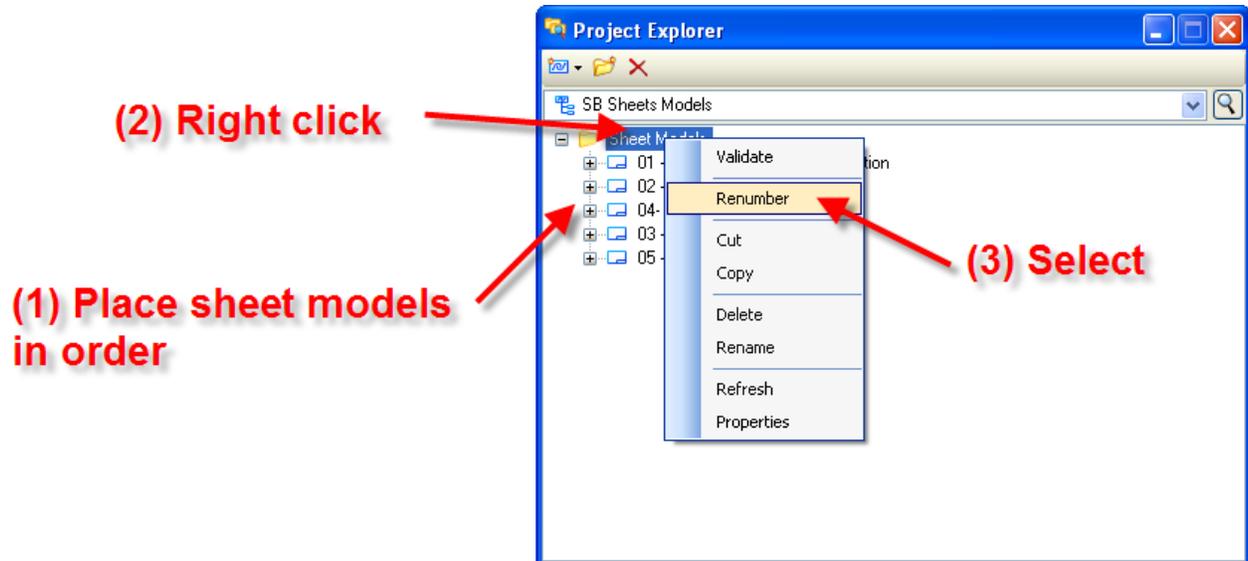


Figure 11 - Sheet Model Renumbering

Now that the sheet models are numbered correctly, the section callouts, detail callouts, and drawing titles will be updated.

Section 2 Creating and Linking Match Marks, Notes, and Detailing Symbols

2.1 Match Marks

1. Place the Match Mark Text using the Contract Annotations task, as shown below:

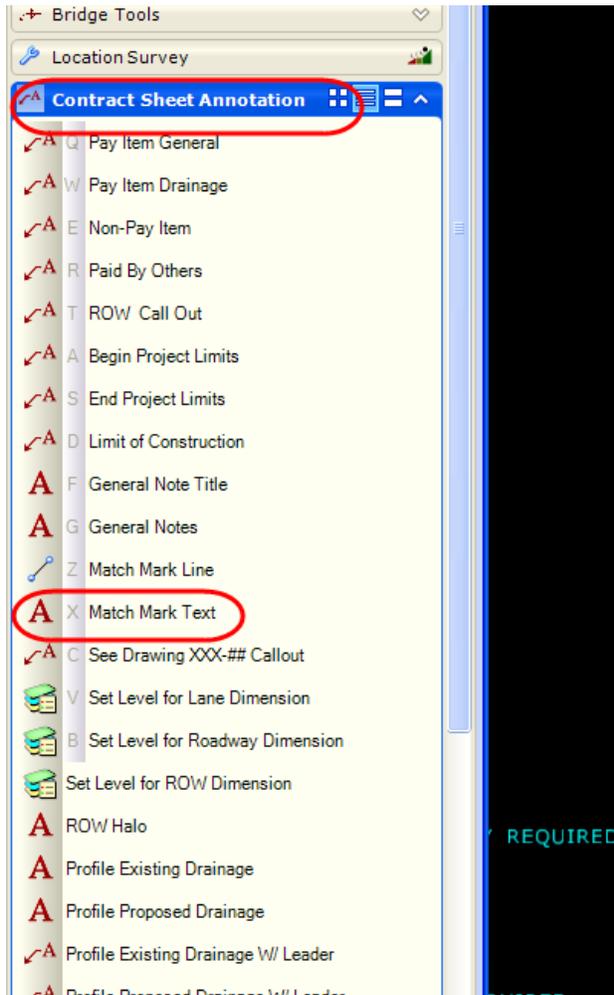


Figure 12 - Match Mark

2. Rotate it to the correct orientation. The text on the end that says, “DescriptionSheet Number” will be updated when we link the note to the correct drawing.



Figure 13 - Match Marks

3. To link the match mark to the correct sheet model, right click on the sheet model in the link set and select “Add Link to Element”. Then click on the match mark text.

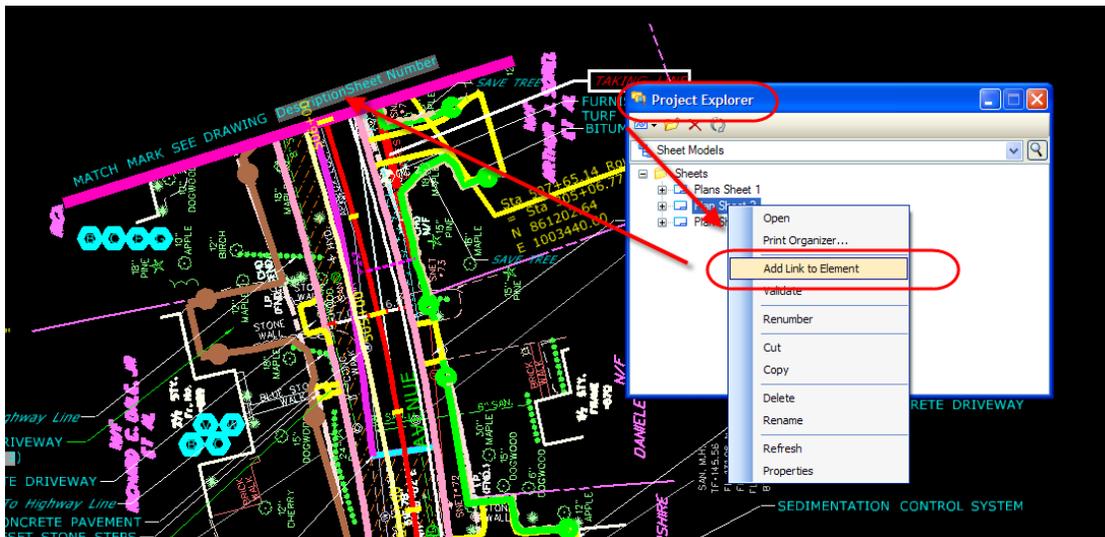


Figure 14 - Linking Match Marks

The text will not update but a link has been made. The text will update if you close it and come back in or you can click on the update field tool shown below:

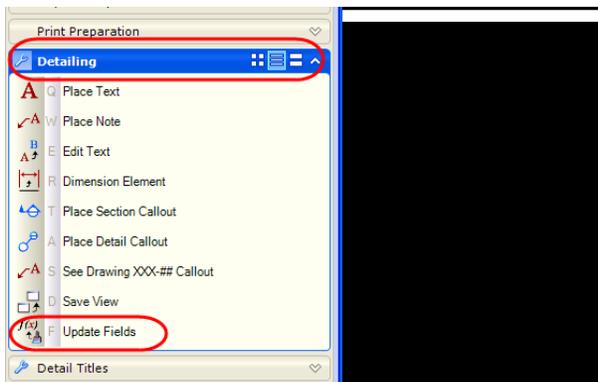


Figure 15 - Update Fields Tool

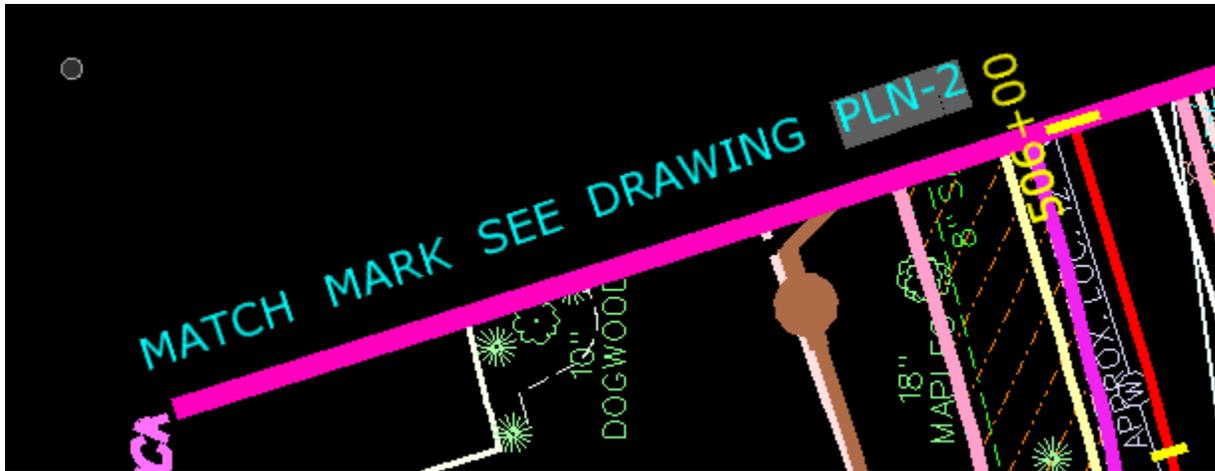


Figure 16 - Updated Match Mark

The match mark above is now linked to drawing PLN-2, if PLN-2 changes the match mark will also change.

2.2 Notes

1. Place note that needs to be referenced by selecting the “See Drawing XXX-## Callout” in the Contract Sheet Annotation task.

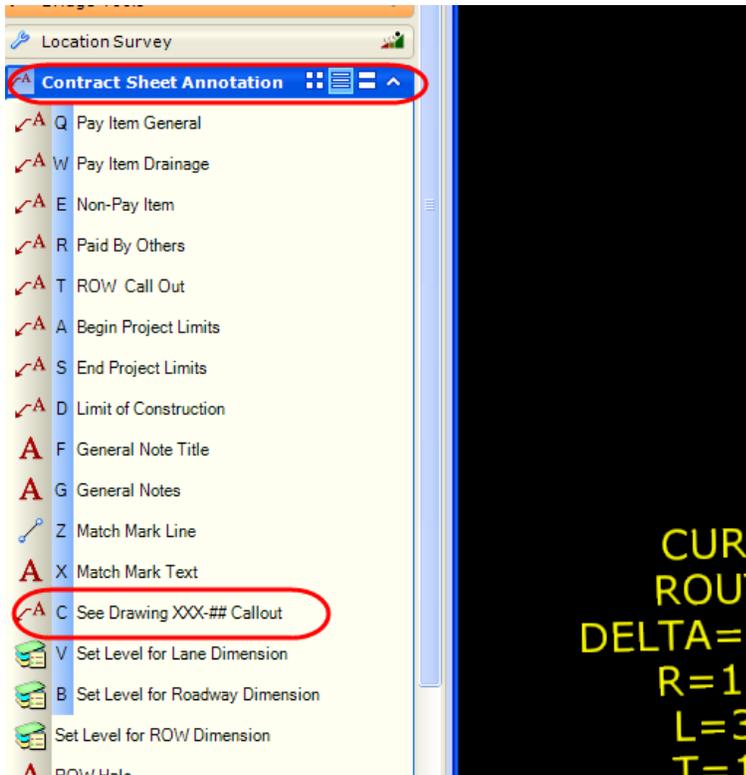


Figure 17 - Placing Reference Note

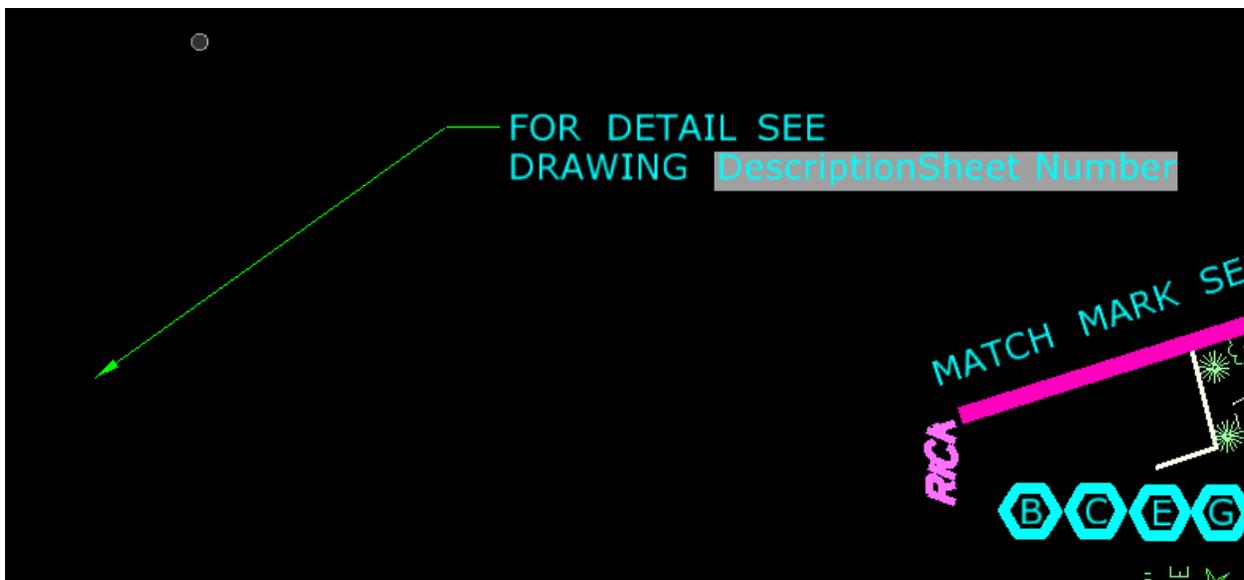


Figure 18 - Reference Note

- The note is a cell so the first thing we need to do is select the drop element tool so we can update the location and orientation.

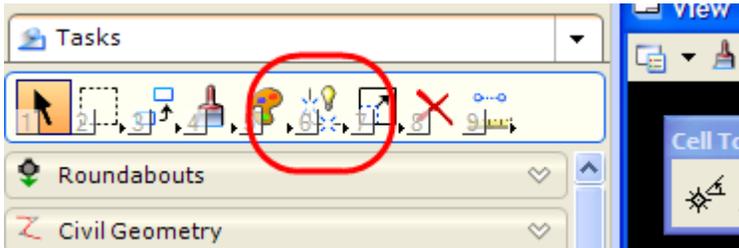


Figure 19 - Drop Element Tool

Click on the area below when using the drop element tool. If the text is selected, the text cannot be linked.

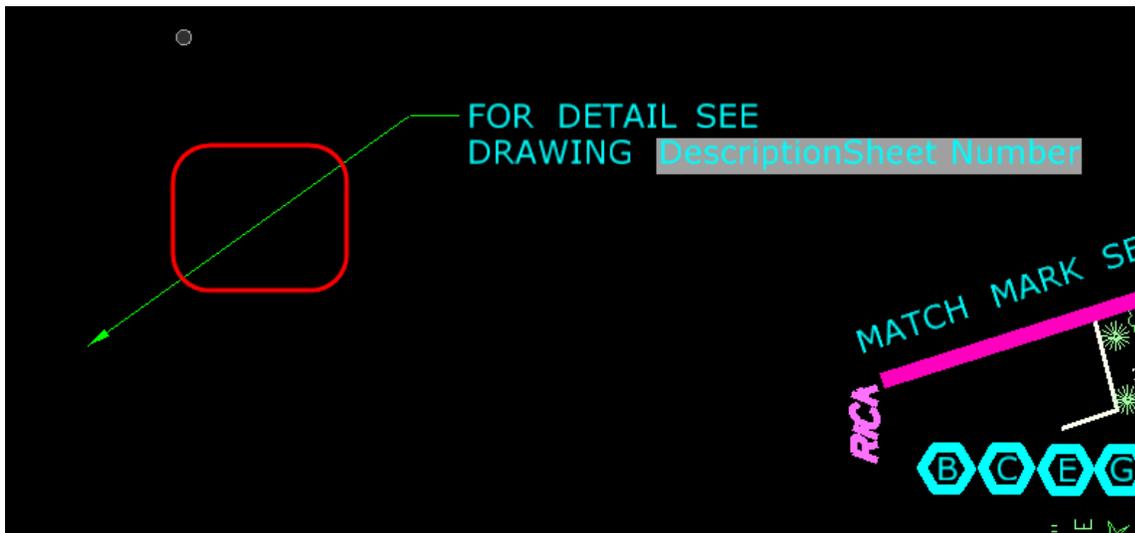


Figure 20 - Area to use the Drop Element Tool

- Now the cell can be edited. Note: Do Not Delete “DescriptionSheet Number” this is how the text gets linked.

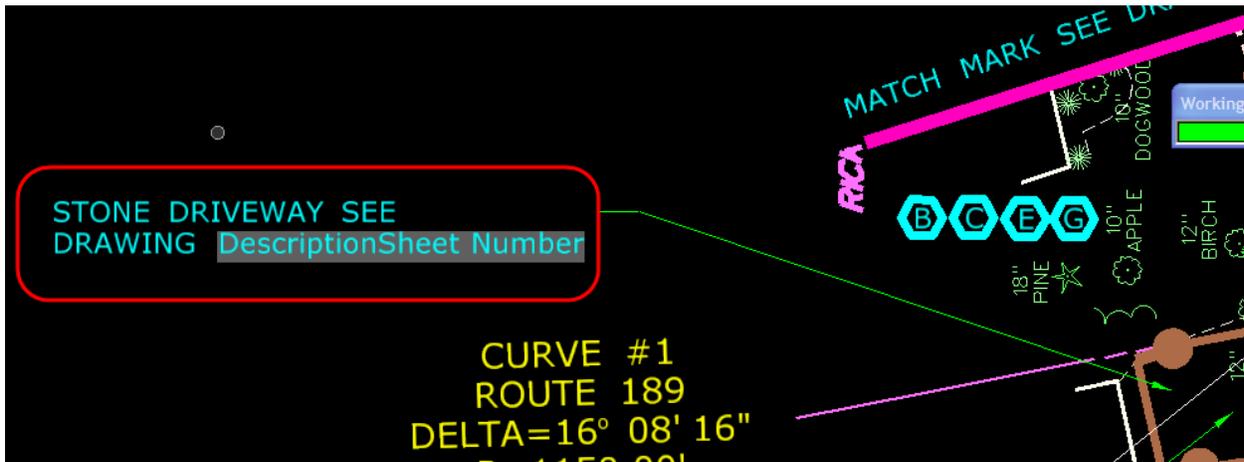


Figure 21 - Editing Reference Cell

- To link the note to the correct sheet model, right click on the sheet model in the link set and select "Add Link to Element". Then click on the match mark text.

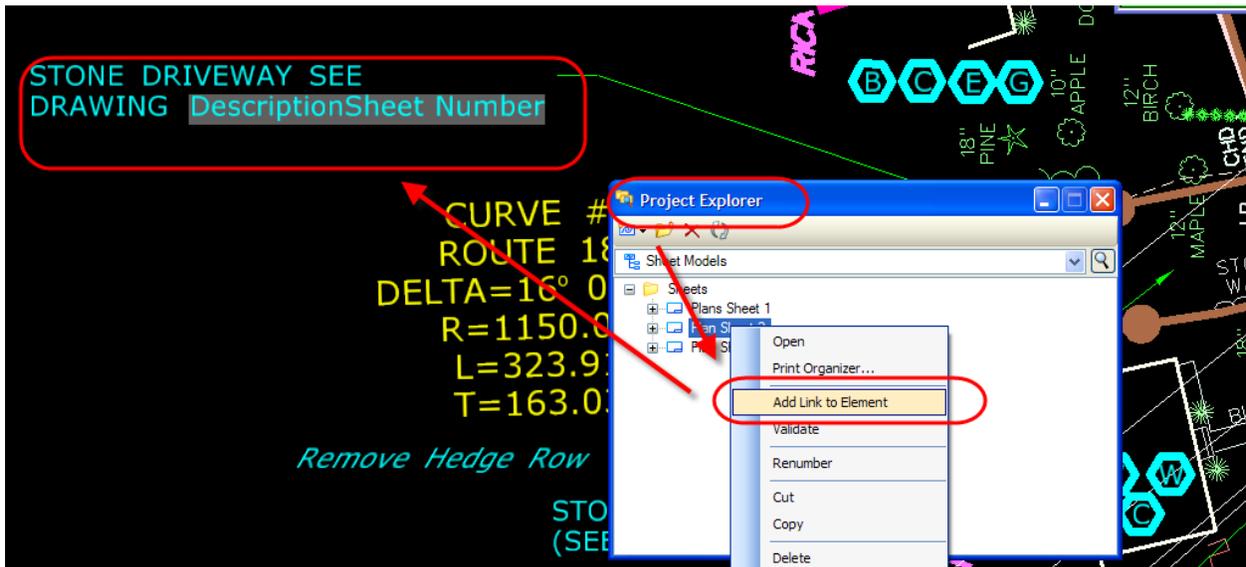


Figure 22 - Add Link To Element

The text will not update but a link has been made. The text will update if you close it and come back in or you can click on the update field tool shown below:

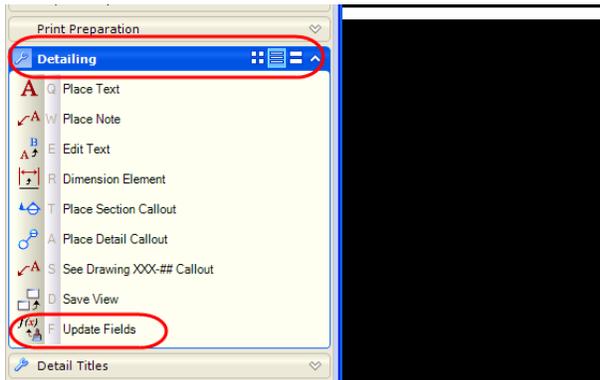


Figure 23 - Update Fields Tool

2.3 Placing Section Callout

Follow the figure below for placing a section callout.

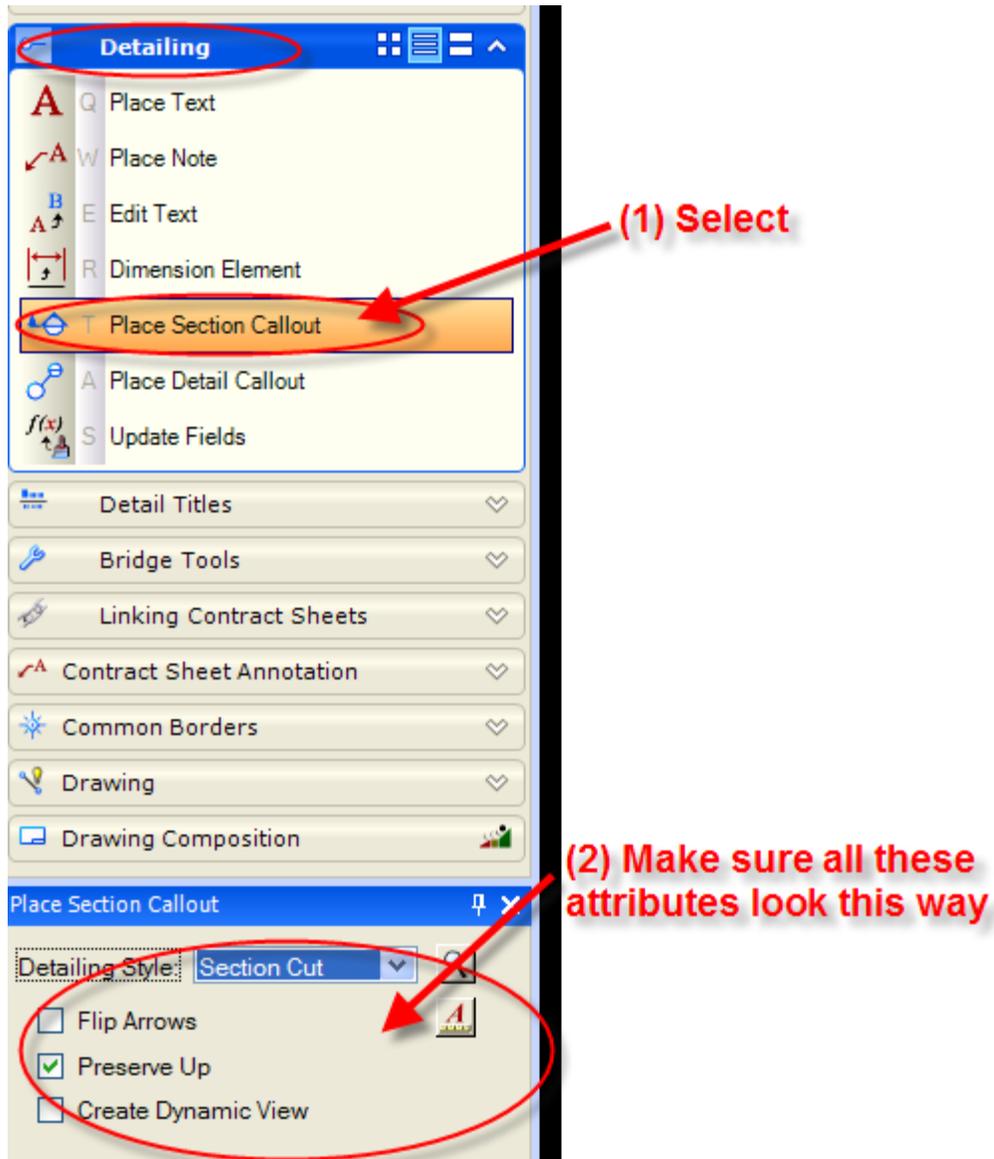


Figure 24 - Place Section Callout

Below is the section callout that was created. The text shown in the section callout bubble is where the information is being taken from. Do not edit the text fields; this will be done automatically after the title for the section is made.

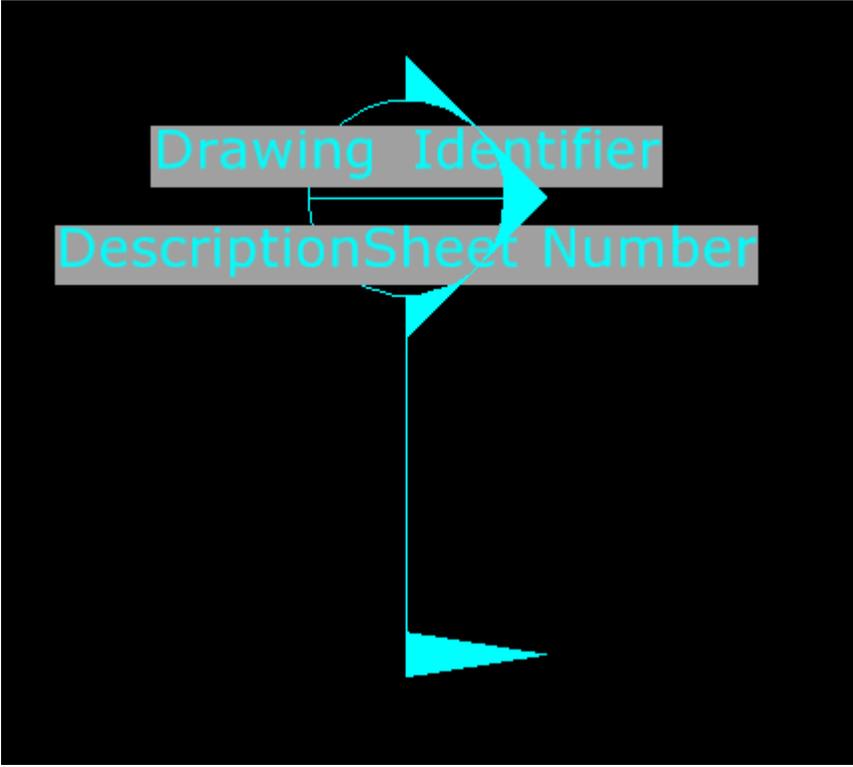


Figure 25 – Section Callout

2.4 Section Title

Follow the figure below for placing a section title.

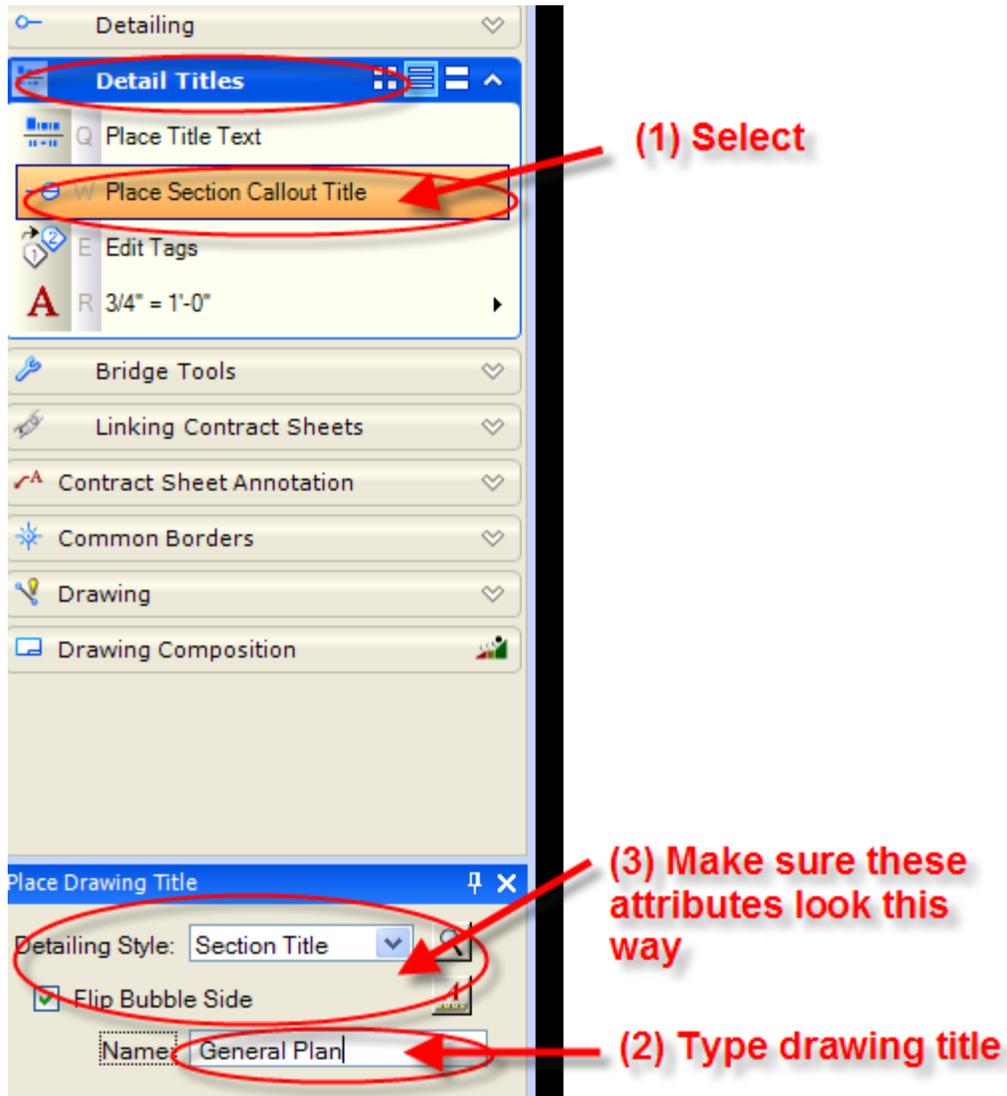


Figure 26 - Place Drawing Title

Below is the drawing title that was placed:



Figure 27 - Drawing Title

The drawing identifier came in as 1 because it was the first drawing made. The sheet number came in as S-0 because Microstation gives a default value of 0 for a sheet number when a new sheet is created. These will be updated later when we renumber the sheets. The title name is what was given when it was placed. If the drawing title needs to be changed, this can only be done in the element information window as shown below:

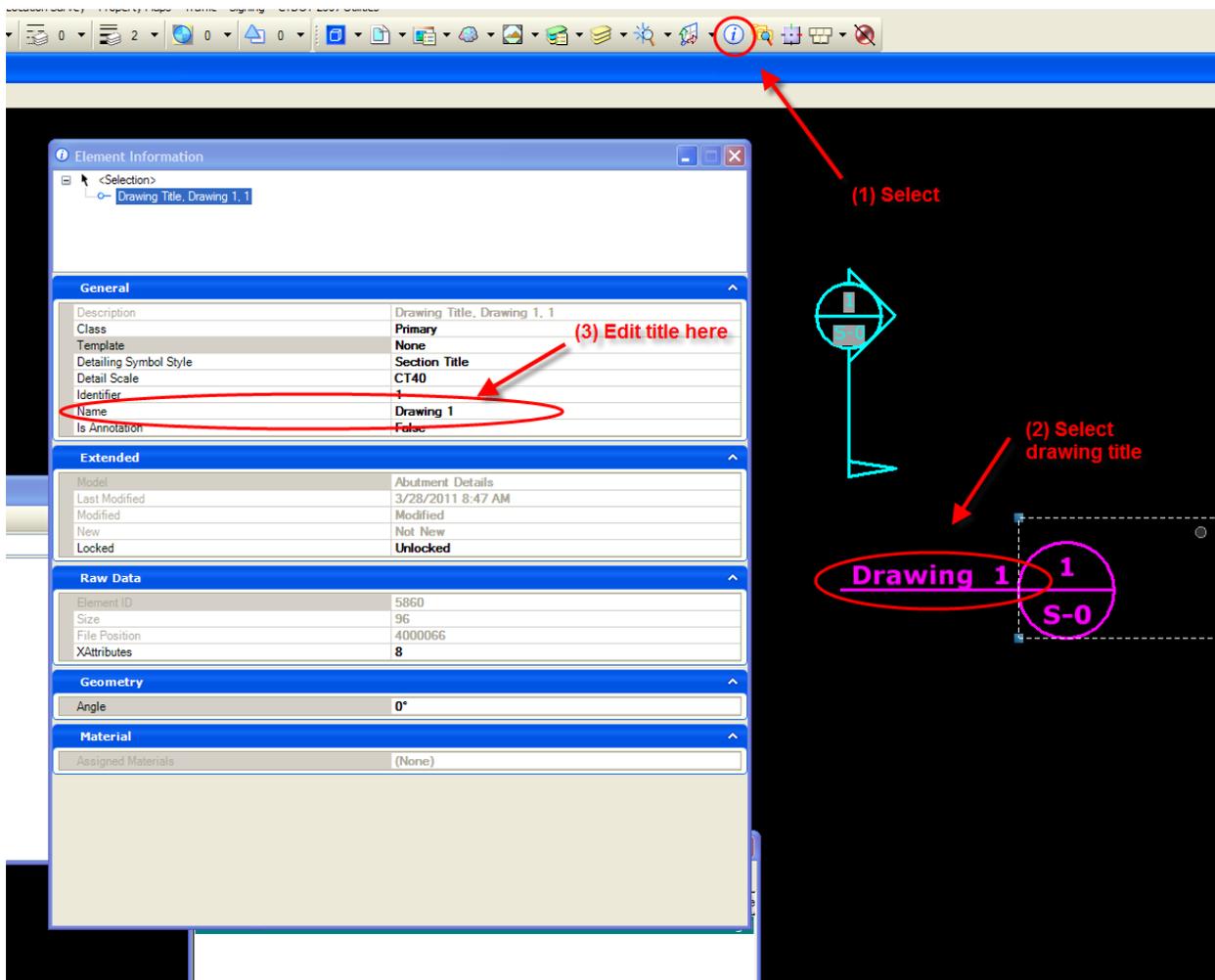


Figure 28 - Editing Drawing Title

See the figure below to place the correct scale for the drawing:

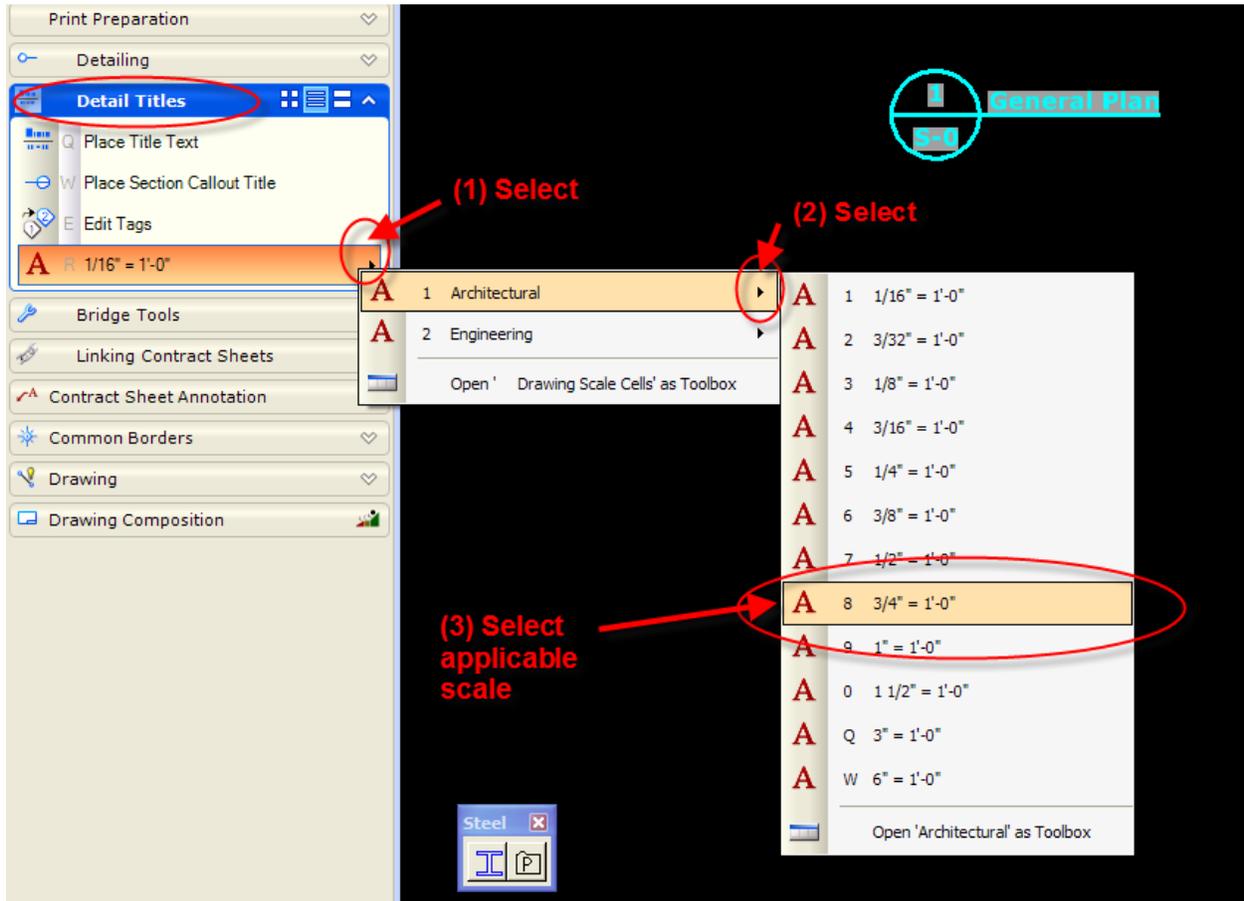


Figure 29 - Place Correct Scale

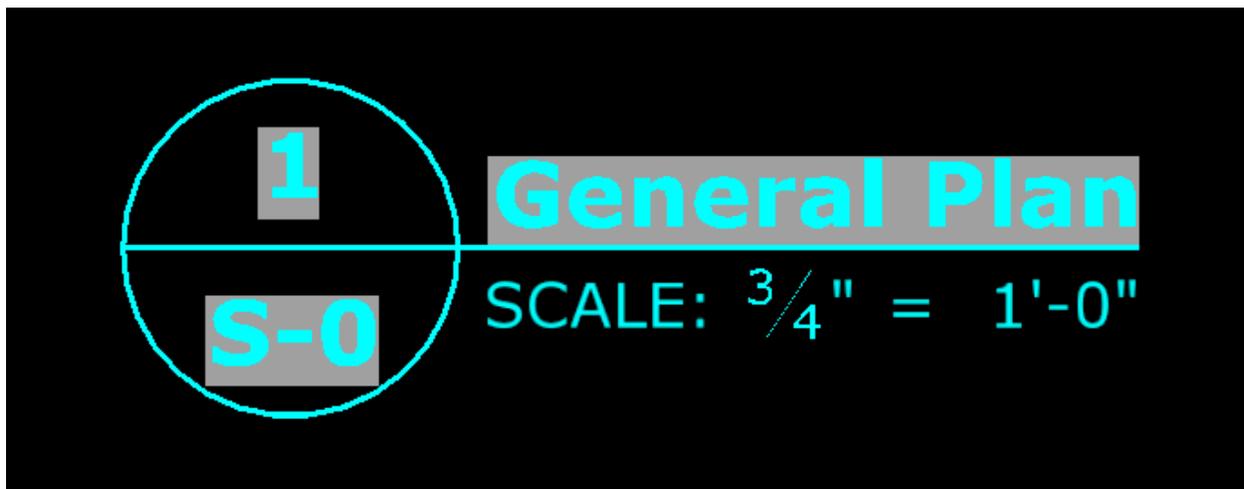


Figure 30 - Drawing Title with Correct Scale

2.5 Linking the Section Callout and Section Title

Follow the figures below linking the section callout and section title:

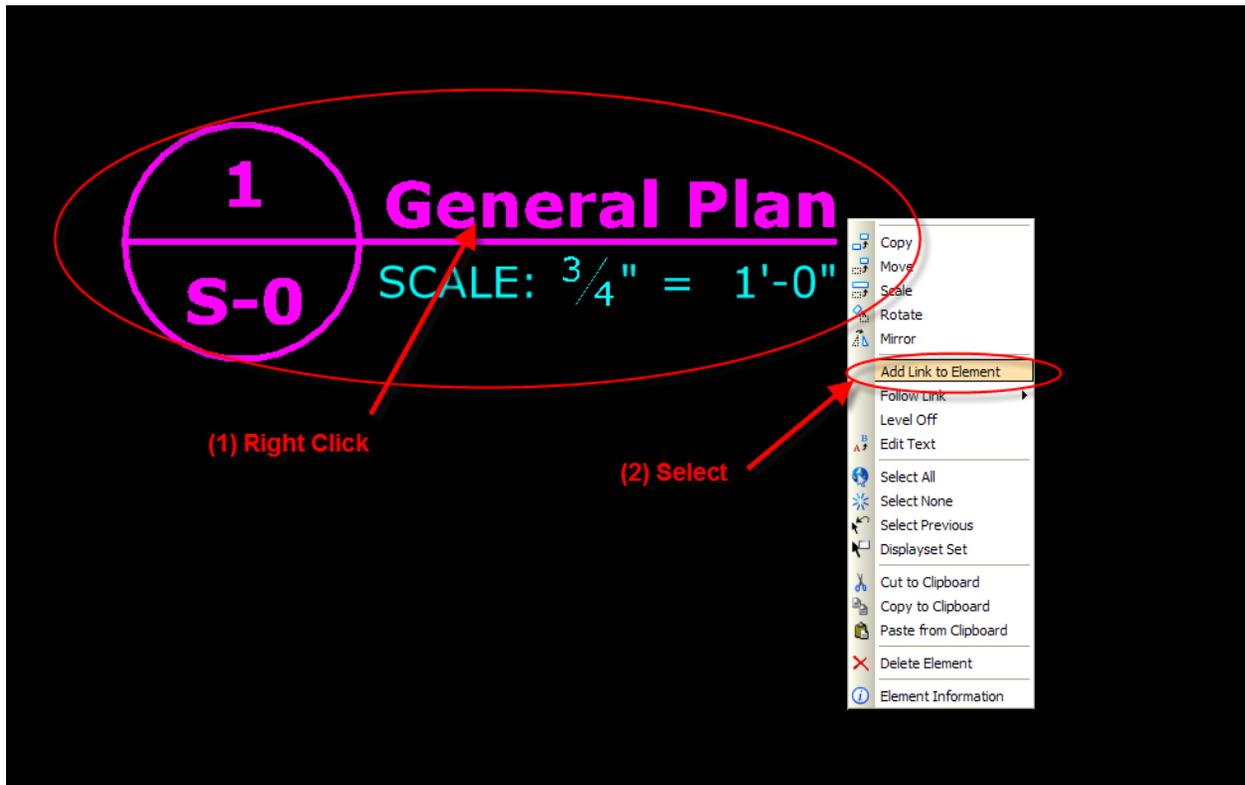


Figure 31 - Add Link to Element

Next identify element:

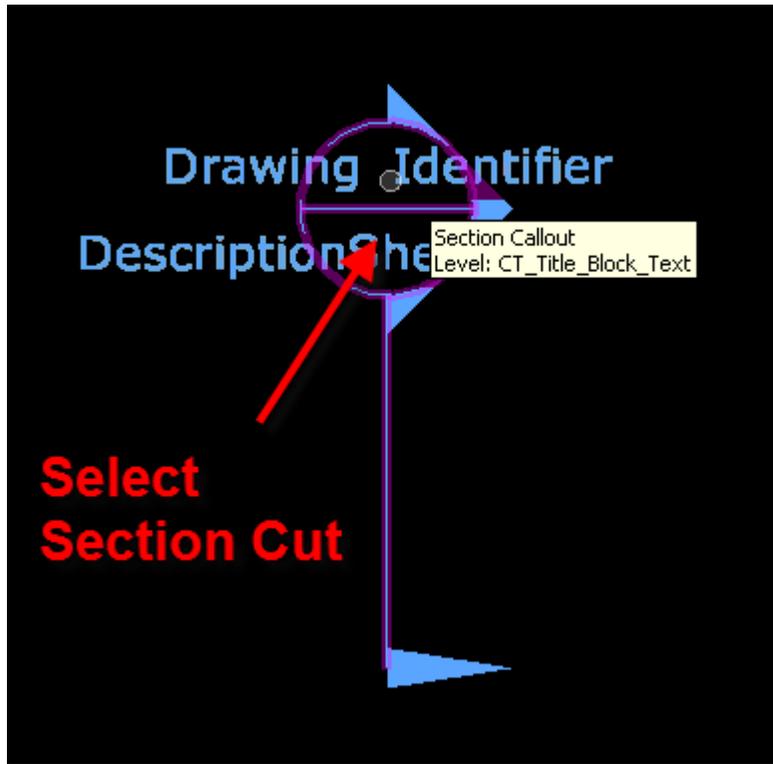


Figure 32 - Selecting Element to Link

The section callout will not update automatically, select the all fields icon as shown below to apply the update:

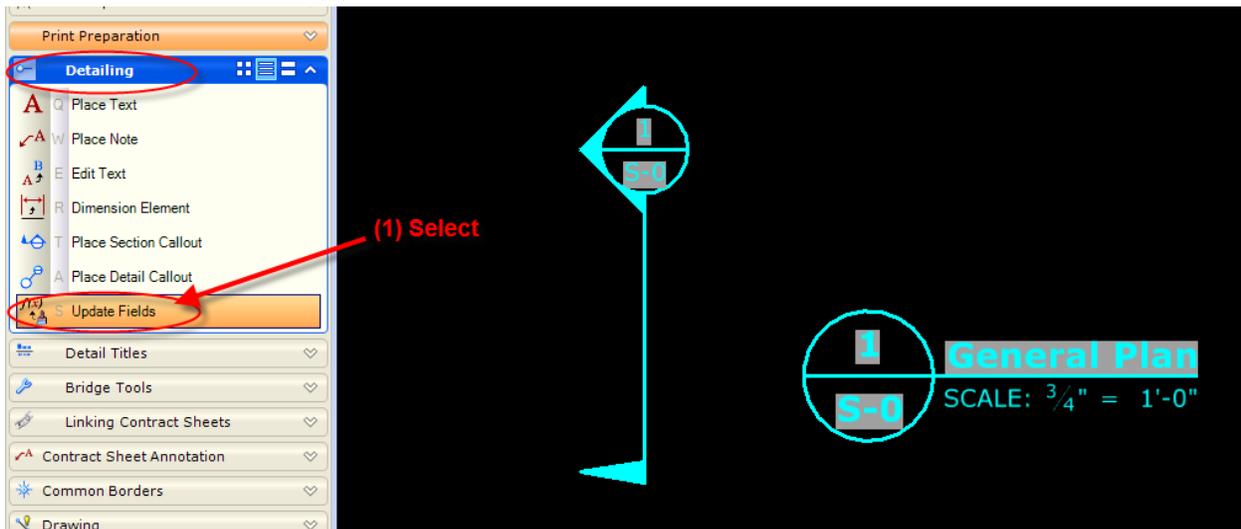


Figure 33 - Updating Section Callouts and Drawing Titles

The drawing titles and section callouts will update automatically when you reopen a drawing.

2.6 Detail Callout

Follow the figure below for placing a detail callout:

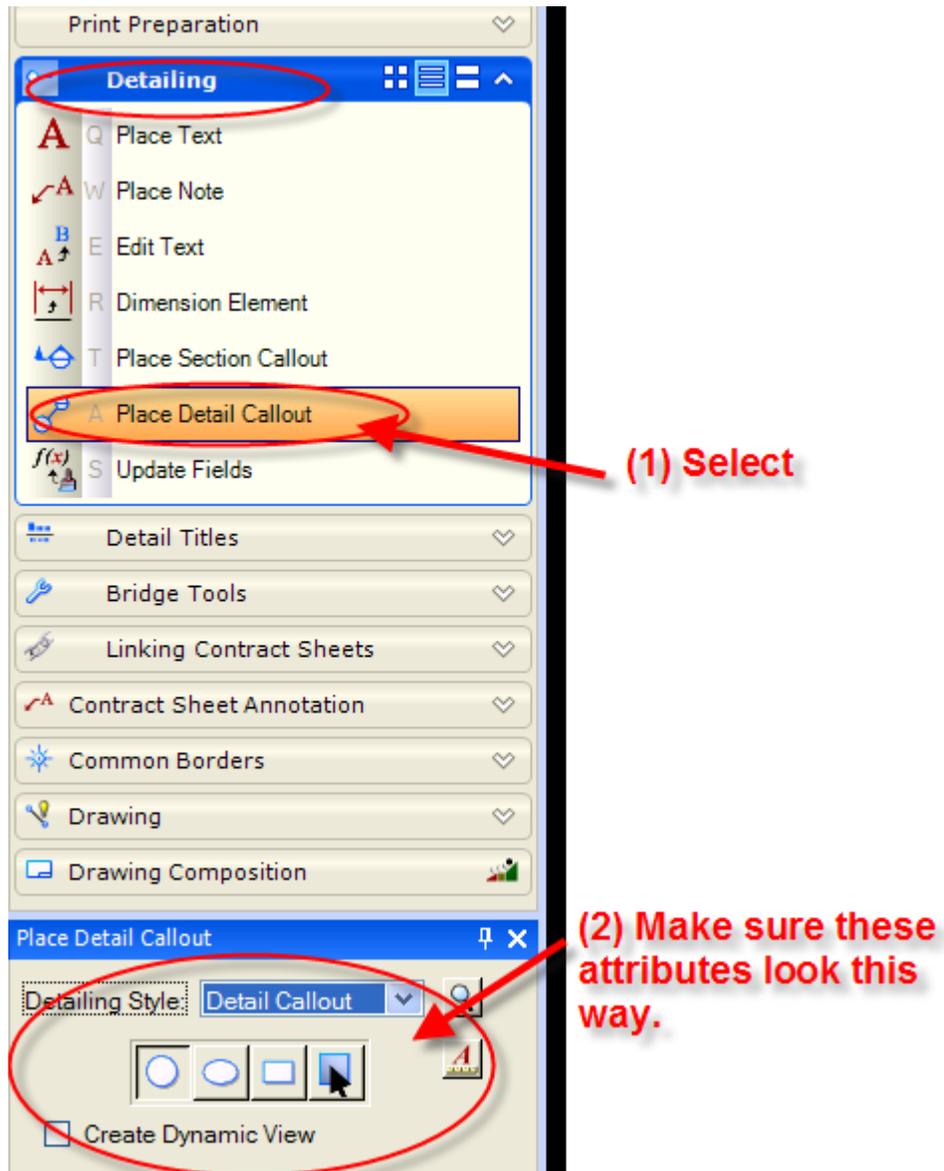


Figure 34 - Detail Callout

Follow [Linking the Section Callout and Section Title](#) for linking the detail callout with its applicable drawing title.

2.7 Placing Drawing Title

Follow the figure below for placing a drawing title that does not require a section bubble:

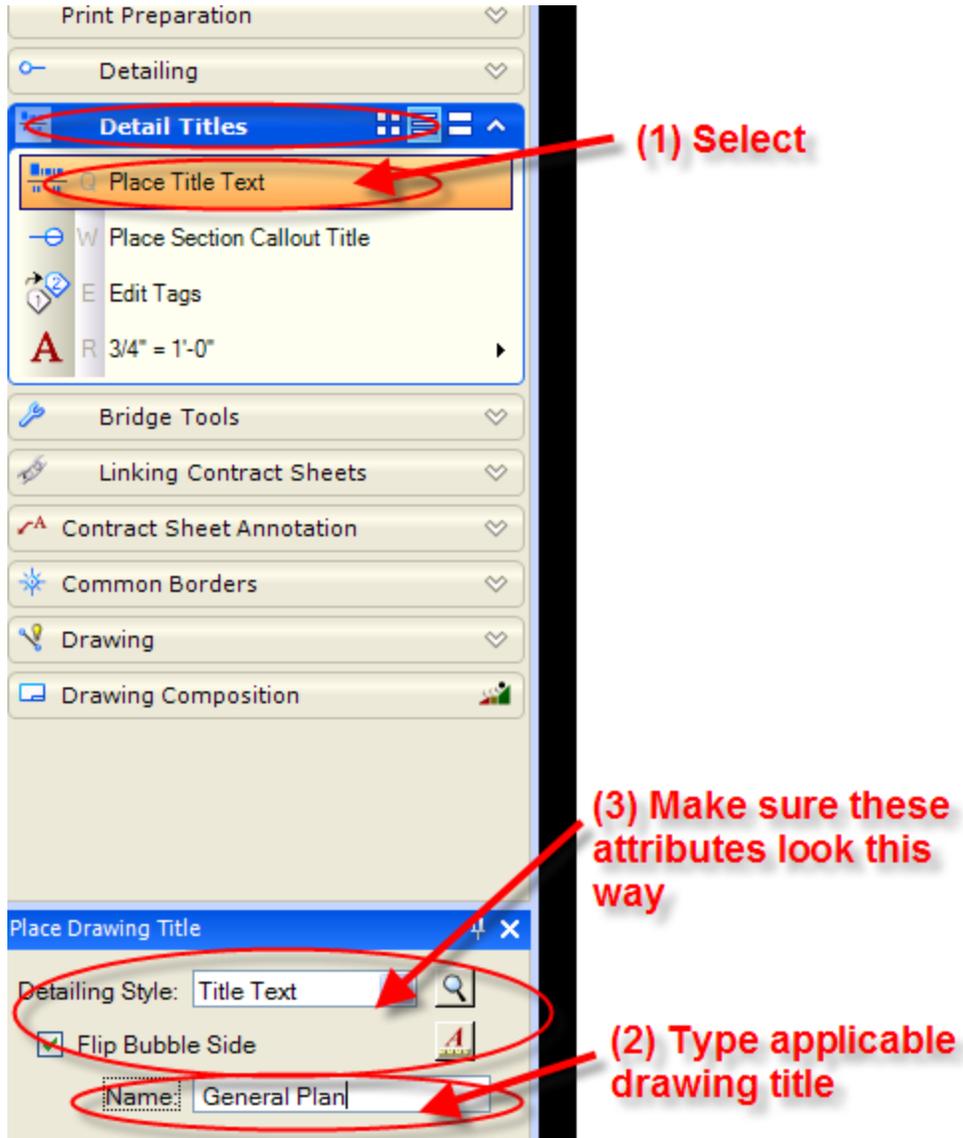


Figure 35 - Placing Title

If the drawing title needs to be changed, this can only be done in the element information window as shown in [Figure 28 - Editing Drawing Title](#) of this document.

2.8 Linking the Section/Detail Callout and Section Title From the Same Contract Sheet

Follow the figures below linking the section callout and section title:

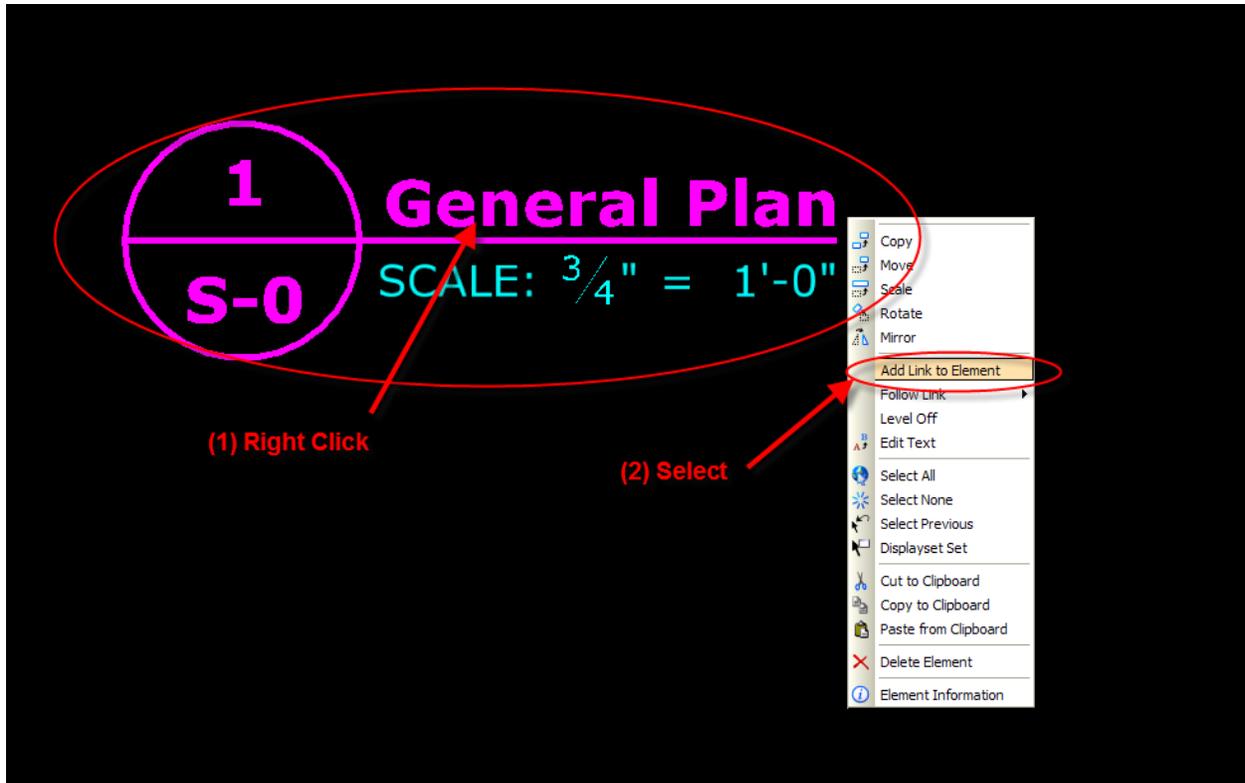


Figure 36 - Add Link to Element

Next identify element:

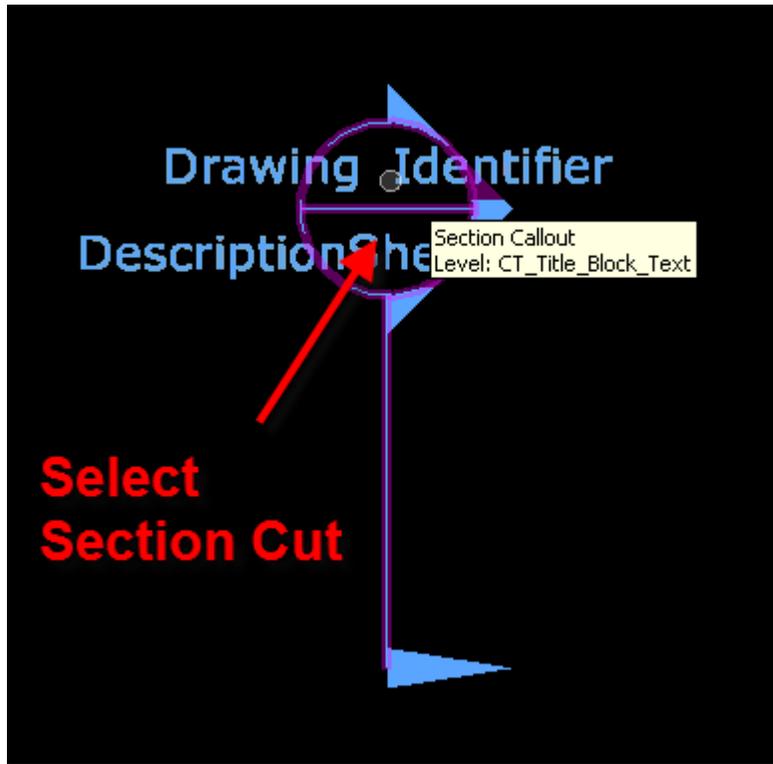


Figure 37 - Selecting Element to Link

The section callout will not update automatically, select the all fields icon as shown below to apply the update:

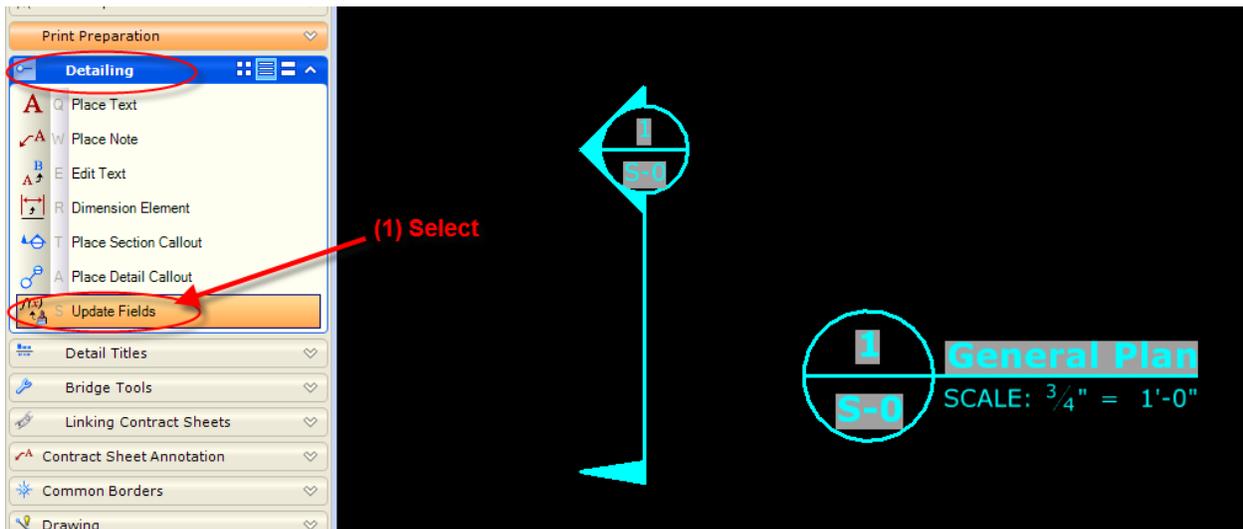


Figure 38 - Updating Section Callouts and Drawing Titles

The drawing titles and section callouts will update automatically when you reopen a drawing.

2.9 Linking the Section/Detail Callout to a Title From one Contract Sheet to Another

- (1) Open the drawing with the section/detail callout that needs to be linked to a drawing title on another sheet.
- (2) Follow the figures below for linking a section/detail callout to a title on a different contract sheet.

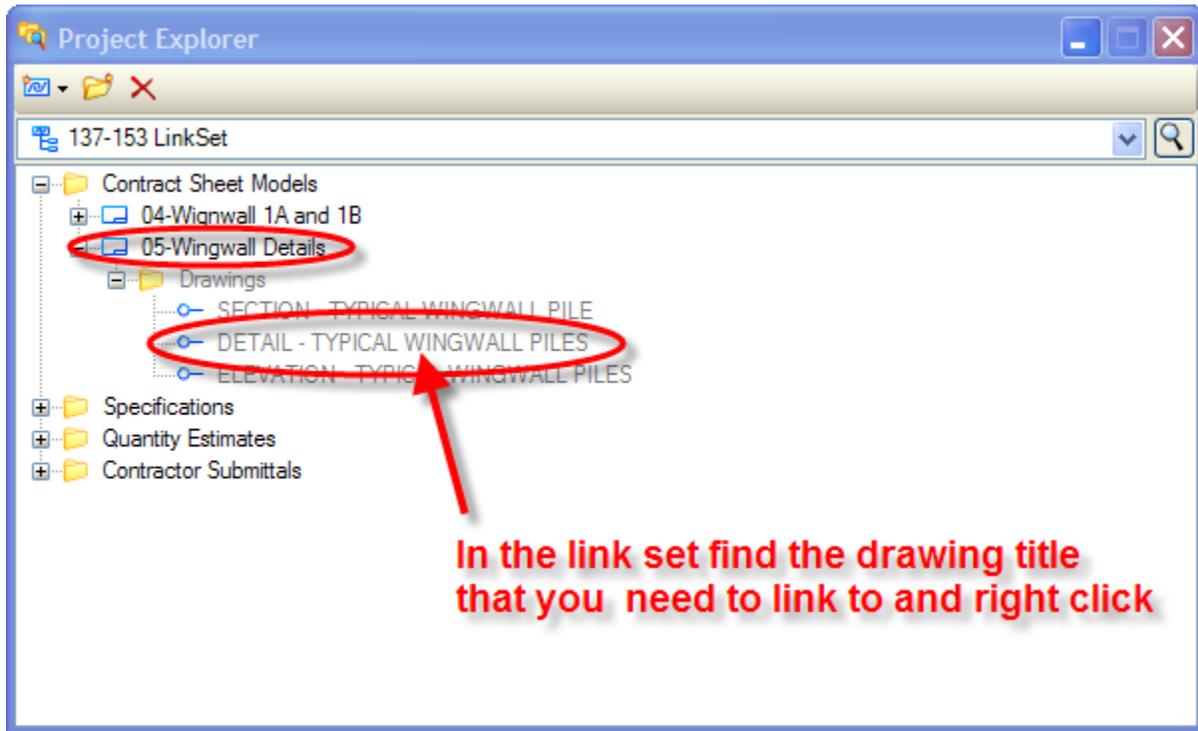


Figure 39 - Linking Callouts to a Title

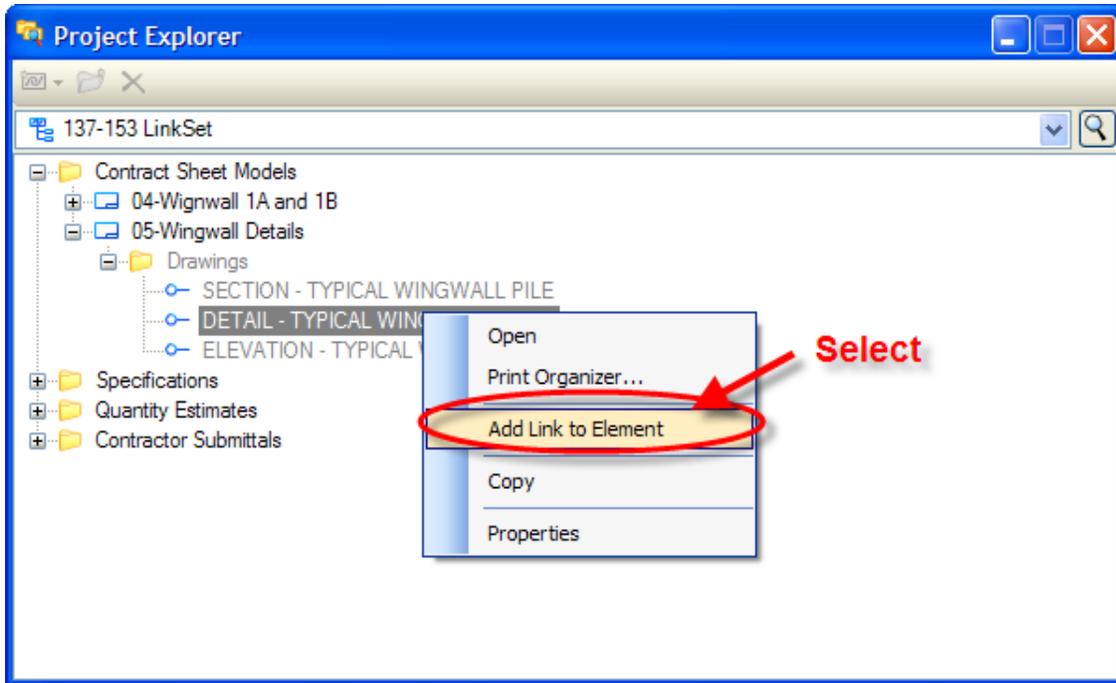


Figure 40 - Adding Link to Element

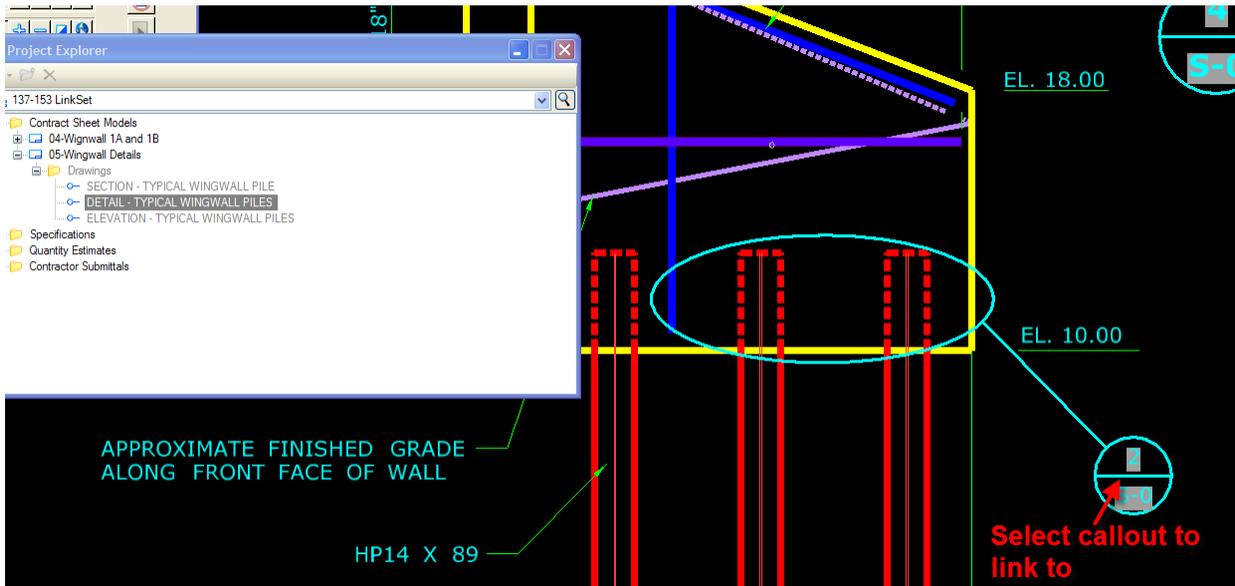


Figure 41 - Linking Element

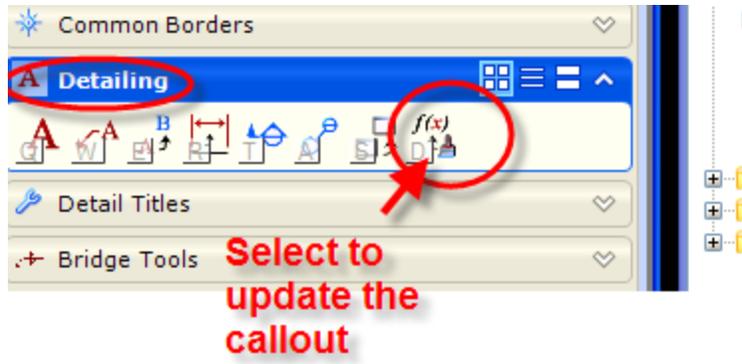


Figure 42 - Updating Callouts